

CLAIMS

1. A data processor comprising:

a receiving section for receiving video data and audio

5 data;

a compressing section for generating encoded data,
complying with the MPEG-2 system standard, by encoding the
video data and the audio data received;

an auxiliary information generating section for
10 generating auxiliary information, which includes reference
information to make reference to the encoded data and
attribute information that uses a video object unit (VOBU) of
the encoded data as a sample unit and that describes an
attribute of the sample unit; and

15 a writing section for writing the encoded data and the
auxiliary information on a storage medium as a data file and
an auxiliary information file, respectively,

wherein the encoded data is decodable by either the
auxiliary information file or the MPEG-2 system standard.

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2. The data processor of claim 1, wherein the reference information represents the file name and storage location of the data file stored on the storage medium.

5 3. The data processor of claim 1, wherein the compressing section generates the encoded data as a plurality of sets, and

 wherein the auxiliary information generating section generates the reference information that makes reference to
10 each said set of encoded data.

4. The data processor of claim 1, wherein the compressing section generates the encoded data as a plurality of sets, and

15 wherein the auxiliary information generating section generates stream data as a single stream by arranging the plurality of sets of encoded data as a series, and also generates auxiliary information that further describes location information specifying the storage location of the
20 encoded data if the data size of the encoded data is not

constant every time the data is read.

5 5. The data processor of claim 1, wherein the
compressing section generates the encoded data as either an
MPEG-2 program stream or an MPEG-2 transport stream.

6. The data processor of claim 1, wherein the auxiliary
information generating section describes an audio frame of
encoded audio data, representing the audio data of the encoded
10 data, as another sample unit in the attribute information.

7. The data processor of claim 3, wherein the
compressing section generates first, second and third data
files, the second data file including frame data that is
15 needed to decode the encoded data of the first and third data
files continuously with no time gap left.

8. The data processor of claim 1, wherein the auxiliary
information generating section generates an auxiliary
20 information file that is described in the MP4 format.

9. The data processor of claim 1, wherein the auxiliary information generating section generates an auxiliary information file that is described in the QuickTime format.

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10. Stream data comprising: encoded data included in a data file; and auxiliary information included in an auxiliary information file,

wherein the encoded data is obtained by encoding video
10 data and audio data in accordance with the MPEG-2 system standard, and is decodable by either the auxiliary information or the MPEG-2 system standard, and

wherein the auxiliary information includes: reference information to make reference to the encoded data; and
15 attribute information that uses a video object unit (VOBU) of the encoded data as a sample unit and that describes an attribute of the sample unit.

11. A storage medium on which the stream data of claim
20 10 is stored.

12. A data processor comprising:

a reading section for reading the auxiliary information
file from the stream data of claim 10¹ and also reading the
5 data file in response to a control signal;

a reading control section for generating, as the control
signal, a signal instructing that the data file be read in
accordance with the reference information defined by the
auxiliary information of the auxiliary information file;

10 a decoding section, which receives the encoded data from
the data file read and the auxiliary information and which
decodes the encoded data into the video data and the audio
data in accordance with the attribute information included in
the auxiliary information; and

15 an output section for outputting the video and audio data
decoded.

13. A data writing method comprising steps of:

receiving video data and audio data;

20 generating encoded data, complying with the MPEG-2 system

standard, by encoding the video data and audio data received;

generating auxiliary information, which includes
reference information to make reference to the encoded data
and attribute information that uses a video object unit (VOBU)
5 of the encoded data as a sample unit and that describes an
attribute of the sample unit; and

writing the encoded data and the auxiliary information on
a storage medium as a data file and an auxiliary information
file, respectively,

10 wherein the encoded data is decodable by either the
auxiliary information file or the MPEG-2 system standard.

14. A computer program to be executed by a data
processor, the program comprising steps of:

15 receiving video data and audio data;
generating encoded data, complying with the MPEG-2 system
standard, by encoding the video data and audio data received;
generating auxiliary information, which includes
reference information to make reference to the encoded data
20 and attribute information that uses a video object unit (VOBU)

of the encoded data as a sample unit and that describes an attribute of the sample unit; and

writing the encoded data and the auxiliary information on a storage medium as a data file and an auxiliary information file, respectively,

wherein the encoded data is decodable by either the auxiliary information file or the MPEG-2 system standard.

15. A data reading method comprising steps of:

10 reading the auxiliary information file from the stream data of claim 10;

generating a control signal instructing that the data file be read in accordance with the reference information defined by the auxiliary information of the auxiliary information file;

15 reading the data file in response to the control signal;

receiving the encoded data from the data file read and the auxiliary information and decoding the encoded data into the video data and the audio data in accordance with the attribute information included in the auxiliary information;

and

outputting the video and audio data decoded.

16. A computer program to be executed by a data
5 processor, the program comprising steps of:

reading the auxiliary information file from the stream
data of claim 10;

generating a control signal instructing that the data
file be read in accordance with the reference information
10 defined by the auxiliary information of the auxiliary
information file;

reading the data file in response to the control signal;

receiving the encoded data from the data file read and
the auxiliary information and decoding the encoded data into
15 the video data and the audio data in accordance with the
attribute information included in the auxiliary information;
and

outputting the video and audio data decoded.

20 17. A data processor comprising:

a receiving section for receiving video data and audio data;

a compressing section, which encodes the received video and audio data by a predetermined encoding technique, thereby
5 generating encoded data in which data representing the video data and data representing the audio data are interleaved with each other; and

an auxiliary information generating section for generating auxiliary information, which includes reference
10 information to make reference to the encoded data and attribute information that describes an attribute of a sample unit,

wherein the sample is a set of the encoded data that has been collected according to a playback duration of the video
15 data, and

wherein the encoded data is decodable by either the auxiliary information or a decoding technique corresponding to the predetermined encoding technique.